

REMARKS

Reconsideration is requested.

Claims 1-4, 9-10 and 12-13 have been canceled, without prejudice. Claims 14-16 have been added. Claims 5-8, 11 and 14-16 are pending. No new matter has been added.

The specification has been amended to include a new title, as suggested by the Examiner at page 2 of the Office Action dated September 22, 2004. Withdrawal of the objection to the Title is requested.

The Examiner's objection to the specification relating to a further requirement for a Sequence Listing is not understood as the applicants believe the Amendment of November 19, 2001 inserted an appropriate Sequence Listing and sequence identifiers, including identifiers to sequences disclosed in Figure 5, noted by the Examiner in the Office Action of September 22, 2004. Withdrawal of the objection or further clarification is requested.

The Examiner's comments on page 3 of the Office Action dated September 22, 2004, with regard to the quality of the previously-filed drawings is noted however as a specific objection or rejection of the drawings has not been received by the applicants, the applicants are uncertain as to what further may be required with regard to the drawings. The attached drawings are submitted to be acceptable and the Examiner's confirmation of the same is requested.

The Section 112, first paragraph, rejection of claim 9 is moot in view of the above.

The Section 103 rejection of claims 5-8 over "the commercial availability of computers and various software packages such as RASMOL, see the specification the paragraph bridging page 12 and 13, an [sic, as?] admitted prior art, in view of Jones *et al.* [IDS reference : J. Bacteriol. [sic] 1993, Vol. 175, pages 2125-2130]" (see, page 4 of the Office Action dated September 22, 2004) is traversed. The Section 103 rejection of claim 11 over Kurtov et al (Mol. Gene Genet 1999, vol. 262, pages 115-120) and the passages of the specification relied upon by the Examiner, is traversed.

Reconsideration and withdrawal of the rejections are requested in view of the following and the attached.

The rejections appears to be fashioned after the Case 6 and Case 7 description in the attached "Trilateral Project WM4 Comparative studies in new technologies (biotechnology, business methods, etc.) – Report on Comparative study on protein 3-dimensional (3-D) structure related claims" Vienna, Austria, November 4-8, 2002, and specifically, pages 25-26 of the attached Report, which, like the present Examiner, relies on *In re Gulack* 703 F.2d 1381, 1385 (Fed. Cir. 1983) for the broad assertion that "nonfunctional descriptive material cannot render nonobvious an invention that has otherwise been obvious." See, page 5 of the Office Action dated September 22, 2004 and the last four lines of page 25 of the attached copy of the cited Report.

The applicants submit that the Examiner's reliance on *In re Gulack* is misplaced with regard to the pending claims and that the obviousness rejections should be withdrawn.

The presently claimed invention provides a method of identifying an agent compound which modulates ketopantoate hydroxymethyltransferase (KPHMT) activity

and a method of determining the structure of a KPHMT homologue using three-dimensional coordinates which are, according to the analysis of the attached Report, novel. The Examiner has not provided any art suggesting that the coordinates used in the presently claimed invention are not novel. The claims therefore provide a method of using a novel product.

The Examiner is requested to consider the attached copy of the Federal Circuit's decision in *In re Ochiai*, 37 USPQ2d 1127 (Fed. Cir. 1995) wherein the court found that, essentially, a claim to a process of making a particular cephem compound having antibiotic properties, using a particular type of new and unobvious organic acid as one of starting materials, was not *prima facie* obvious even though similar processes of using similar acids were known for use in similar processes. The *Ochiai* court specifically explained as follows:

"One having no knowledge of this acid could hardly find it obvious to make any cephem using this acid as an acylating agent, much less the particular cephem recited in claim 6. In other words, it would not have been obvious to those of ordinary skill in the art to choose the particular acid of claim 6 as an acylating agent for the known amine for the simple reason that the *particular* acid was unknown but for Ochiai's disclosure in the '492 application. As one of our predecessor courts had occasion to observe, in a case involving a highly analogous set of facts, "one cannot choose from the unknown." *Mancy*, 499 F.2d at 1293, 182 USPQ at 306.
3 " See, Ochiai at 1131.

In the present case, similar reasoning requires a conclusion that one having no knowledge of the three dimensional structure of the recited KPHMT could have hardly found it obvious to use the same in a method of rational drug design, as presently claimed.

Further, the *Ochiai* court reiterated that there is no *per se* rule that a process claim is obvious if prior art references disclose the same general process using "similar" starting materials as such rules sidestep particularized obviousness inquiry required by 35 USC 103 and necessarily produces erroneous results. See, *Ochiai* at 1132.

The applicants respectfully submit that the present Examiner has failed to establish a *prima facie* case of obviousness of the presently claimed method of using a novel and unobvious product and the Section 103 rejection should be withdrawn.

For completeness, a copy of *In re Gulack*, 217 USPQ 401 (CA FC 1983), cited by the Examiner, is attached.

The stated object of the invention in *Gulack* involved the exploitation of certain arithmetic properties of all prime numbers larger than "5, P", to create the semblance of magic or to educate with respect to intriguing aspects of number theory. 217 USPQ 402. The claims of *Gulack* defined a device, as opposed to a process. Specifically, the claims of *Gulack* are understood to have defined a band with numbers printed thereon a manner which satisfied a numerical algorithm recited in the claims. The *Gulack* court described the Examiner's Section 103 rejection of Gulack's device claims as follows:

"In his section 103 rejection, the examiner stated that the appealed claims differed from Wittcoff only in the specific digits printed on the band. The examiner found no relationship between appellant's digits and band except that the band is the surface on which the digits are printed." 217 USPQ 403.

The Board affirmed the Examiner's rejection of Gulack's device claims by finding that

"there is no meaningful functional relationship between appellant's indicia and the claimed endless

*band * * ** In our opinion, the endless loop formed by the hat band with numerical digits printed thereon is the same structure claimed by appellant and *the sole difference is in the content of the printed material* . Accordingly, *there being no functional relationship of the printed material to the substrate, as we have noted above, there is no reasons [sic] to give patentable weight to the content of the printed matter which, by itself, is non-statutory subject matter* .
". *Id.* (Emphasis in original) .

Accordingly, the Board in *Gulack* found unpatentable a band, as a structure, with numbers printed on it wherein the sole difference between the claimed structure and the art was apparently the printed material on the band. The *Gulack* court restated the Board's decision as a holding that the Board was:

not giving the printed matter patentable weight because the board felt that there is no functional relationship between the printed matter and the felt that there is no functional relationship between the printed matter and the substrate. In doing so, we do not interpret the board as holding that the printed matter can be ignored because it, by itself, is non-statutory subject matter. The board cited no authority in analyzing the relevance of the lack of a functional relationship, or of the status of the printed matter as non-statutory subject matter, to its decision not to accord the printed matter patentable weight. Because of the possible ambiguity of the board's articulation of its holding, we feel compelled to clarify the distinction. Differences between an invention and the prior art cited against it cannot be ignored merely because those differences reside in the content of the printed matter. Under section 103, the board cannot dissect a claim, excise the printed matter from it, and declare the remaining portion of the mutilated claim to be unpatentable. The claim must be read as a whole. If the board meant to disregard that basic principle of claim interpretation, we must reverse the rejection as a matter of law. 217 USPQ 402-3 (footnotes removed).

The *Gulack* court, like the *Ochiai* court discussed above, emphasized that rejections for obviousness require a fact specific inquiry which consider the whole of the claimed invention, as opposed to the use of *per se* rules. The applicants respectfully submit that the present Examiner has improperly applied the holding of *Gulack*, which concerned a claim to a printed device, as opposed to a method of using a novel product. Moreover, the applicants submit, with due respect, that the present Examiner has failed to consider the presently claimed invention as a whole or to establish a *prima facie* case of obviousness. The claims are submitted to be patentable over the cited art and withdrawal of the Section 103 rejections is requested.

Finally, the present Examiner's reliance on *Gulack* is curious as the *Gulack* court reversed the Board's holding and the Examiner's rejection. Specifically, as the applicants understand the court's opinion, the art cited by the Examiner in *Gulack* (i.e., Wittcoff) did require or suggest a relationship between the numbers printed on the band while the claimed invention required the stated relationship. A copy of what is believed to be the *Gulack* issued patent claims is attached (U.S. Patent No. 4,416,633).

Issued U.S. claims in the crystal structure area are also attached. See, U.S. Patent No. 6,589,758 (claim 15); U.S. Patent No. 6,631,329 (Claim 11); and U.S. Patent No. 6,675,105 (Claims 15, 38, 41 etc). While the applicants appreciate that each U.S. patent application is examined on its own merits, the applicants believe that the prior issuance of the attached claims is evidence that the U.S. Patent Office has found claims of the type presently claimed to be patentable.

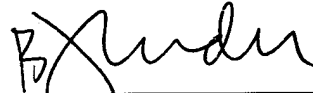
The present claims are submitted to be in condition for allowance and a Notice to that effect is requested.

BLUNDELL et al.
Serial No. **09/820,745**
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Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____



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IN THE FIGURES:

Insert the attached 15 sheets of figures for the originally-filed figures.